

89344

S/191/61/000/001/009/015

B101/B205

## Application of high-frequency...

tubes and the types of resin. Therefore, the possibility of high-frequency heating has been examined. Tests were made with GRP on the basis of different resins: a) 70% epoxy and 30% phenol resin; b) P-2 (R-2), an aniline-formaldehyde resin with zirc stearate. In order to prevent the resin from flowing off, the tubes were rotated with 2-5 rpm. Heating was done in a condenser field, with the metal rod serving as grounded electrode. The optimum strength for epoxy-phenol resin was reached after heating for 2 hr (instead of 20 hr), and for R-2 after 30 min (instead of 6 hr). The heating time could thus be reduced to one-tenth. The limit compressive strength of epoxy-phenol and R-2 resin was 4500 and 3500 kg/cm<sup>2</sup>, respectively. Heating with 20-25 Mc/sec proved to be most favorable. The second electrode of the condenser has been designed in the form of a semi cylinder (I), a cylinder (II), and plane-parallel plates (III) (see Fig. 8). The following capacities were calculated per cm of tube length: 350  $\mu\mu$ f (I); 700  $\mu\mu$ f (II); and 150  $\mu\mu$ f (III). Alternative III was chosen since it facilitates the automation of the process. An apparatus designed by the Scientific Research Institute of High-frequency Currents has an insulated chamber containing h-f plates, a feeding mechanism for tubes, and a drive for rotating rods. A h-f current is generated by an АПД-32

Card 2/3

89344

Application of high-frequency...

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(LGD-32) tube generator and fed to the condenser by a coaxial feeder. The following technical data are presented: rated power of tube generator: 55 kva; mains voltage: 380-220 v; consumption of cooling water: 2.5 m<sup>3</sup>/hr; dimensions of electrodes: 1100-1600 mm; electrode potential: 6-10 kv; frequency: 20·10<sup>6</sup> cps; motor power: 5 kw; cost of treatment per kg of tube: 25-35 kopecks. Performance of the plant:

External tube diameter, mm	wall thickness mm	length mm	output pieces/hr	number of tubes in the condenser, pieces
60	5-7	1500	10	10
80	5-10	1500	10	10
110	7-12	1500	5	5
140	7-15	1500	5	5

There are 8 figures, 1 table, and 1 Soviet-bloc reference.

Legend to Fig.8. I: semicylinder; II: cylinder; III: plane-parallel plates; 1: electrode; 2: air gap; 3: tube; 4: rod.

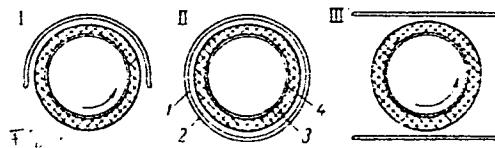


Fig.8

Card 3/3

BRITSYN, N.L.; FEDOROVA, I.G.; SHELINA, T.A.

Accelerated preheating of tabletted molding powders. Plast.massy  
no.5:29-30 '61. (MIRA 14:4)  
(Phenol condensation products)

ACC NR: AR6011878

SOURCE CODE: UR/0081/65/000/016/S061/S061

32  
BAUTHOR: Britsyn, N. L.; Shelina, T. A.; Knyazhskaya, G. S.TITLE: Welding of polyamides by heating in a high-frequency electric field

SOURCE: Ref. zh. Khimiya, Abs. 16S427

REF SOURCE: Tr. Vses. n.-i. in-ta tokov vysokoy chastoty, vyp. 5, 1964, 131-138

TOPIC TAGS: welding, polyamide

ABSTRACT: In the HF welding of polyamides of Soviet brands P-68, P-6, P-8, P-10, and also Rilsan, tricresol was introduced into the weld zone in order to increase the range of the visco-fluid state. The welding was carried out at a frequency of 27 Mc by limiting the final gap, equal to the single thickness of the material. This type of welding does not decrease the mechanical strength of the polyamides because of the short duration of the heating. A change in the mechanical strength of the polyamide weld joint with time (6 months in closed storage and under atmospheric conditions) was demonstrated. The data of experimental investigations were utilized in the development of a technological process for sealing storage battery tanks. V. Pruslin.  
[Translation of abstract]

SUB CODE: /311

Card 1/1

YERASOV, A.V., inzh.; SHELIN, M.P., inzh.

Redesigning of PV-150-3 fuel oil heaters. Elek. sta. 33 no.7:  
84 Jl '62. (MIRA 15:8)  
(Petroleum as fuel)  
(Electric power plants--Equipment and supplies)

SHEVCHENKO, S. V.

"Hydrocarbon Synthesis of the Phenylene Series and the Action of Chlorine on Alpha and Beta Phenolene." Cand Chem Sci, All-Union Sci Res Inst of Synthetic and Natural Essential Oils, Glav. nauchn. i tekhn. Lekal'niy i Min. Light Industry and Min. Food Products Industry, Moscow-Leningrad, 1955. (kh, No 17, Apr 55)

SC: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (1).

FEDCROVA, I.G.; SHELINA, T.A.; BRITSIN, N.L.

Application of the high-frequency welding method to the preparation  
of a soft plastic system for the preservation and transfusion of  
blood. Plast.massy no.3:32-34 '61. (MIRA 14:3)  
(PLASTICS) (BLOOD--COLLECTION AND PRESERVATION)

PANEVA, V.A., prof.; SHELINGOVSKAYA, T.M.

Traumatic hypotension of the eye and its treatment. Vestn.  
oftal. 76 no.4:76-81 Jl-Ag'63 (MIRA 17:1)

1. Kafedra glaznykh bolezney Vinnitskogo meditsinskogo insti-  
tuta.

Determination of total iron in Prussian blue. G. I. Sheinikov and A. M. Borlyachenko. *Zametki fiz. kh.* 7, 1195-9 (1938).—The detn. is based on the thermal decomp. of Prussian blue and the reaction:  $\text{Fe}_3[\text{Fe}(\text{CN})_6]_2 \rightarrow 7\text{Fe}(\text{CN})_3 + 2(\text{CN})_2$ ;  $\text{Fe}(\text{CN})_3 = \text{FeC}_2 + \text{N}_2$ . Excessive heating of a sample must be avoided to prevent the formation of insol.  $\text{Fe}_2\text{C}$ . Calcine a 0.15-0.3-g. sample in a porcelain crucible and dissolve in cold melt in 10-15 ml. of concd. HCl on a sand bath. Det. Fe in the soln. by titration with  $\text{K}_2\text{Cr}_2\text{O}_7$  or with  $\text{KMnO}_4$  as usual.  
Chas. Blanc

APPENDIX METALLURGICAL LITERATURE CLASSIFICATION

CA

26

**Production of white pigments from zinc sulfate.** S. I. Shishinskii and V. M. Bodnarchukova, *Vysok. Lekarstv.*, no. 1, p. 10, 1939; *Zhur. Rastorg. Znak.*, No. 5, 112 (1939). From the reaction of equal quantities of  $ZnSO_4$  with  $CaCO_3$  there was obtained a mixture of  $ZnCO_3$  with hydrated  $CaSO_4$ ; this was converted to  $ZnO-CaSO_4$  by roasting at 300-800°. The  $ZnO-CaSO_4$  was similarly obtained from  $BaCO_3$ . The pigments contained 0.2-0.4% of  $Fe_2O_3$  and are thus suitable only for the production of colored pigments. The covering power of the  $Zn-Ca$  pigment was 130-40 g./sq. cm. and the oil capacity about 21. Owing to its considerable solv. in water the  $Zn-Ca$  pigment can be used only for inside work; the pigment can be used partially to replace lithopone in mixts. A light-blue pigment was prep. from dry lithopone 25%,  $Zn-Ca$  pigment 20%, heavy spar 5%, and Prussian blue 0.04%. The oil capacity of the nov. was 16-17%; the covering power of the paint, 1.4-1.5 g./sq. cm. (W. B. H. see p. 108).

W. H. B. 192

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549020005-5"

Preparation of zinc chromate by using chalk instead of caustic soda. L. E. MELINAKI. *Bulg. J. Tech. Acad.*, No. 1, 1936, No. 11, p. 6. *Atom. Review Year 1939*, No. 6, p. 405. In the intermediate step of producing a basic sulfate from  $ZnSO_4$ ,  $CaCO_3$  is substituted for NaOH. The remaining procedure of treatment with  $Na_2CrO_4$  and  $K_2Cr_2O_7$  remain unchanged. The  $ZnCrO_4$  obtained has good painting and coating properties. Losses of  $ZnO$  and  $Na_2CrO_4$  in the filtrate do not exceed the usual limits. The solv. of this  $ZnCrO_4$  in water is the same as of that obtained from  $ZnSO_4$  and NaOH. — W. R. Henn

ALFA SCA - METALLURGICAL LITERATURE CLASSIFICATION

IRON AND STEEL

METALS

MINING

INDUS. CHEM.

INDUS. PROC.

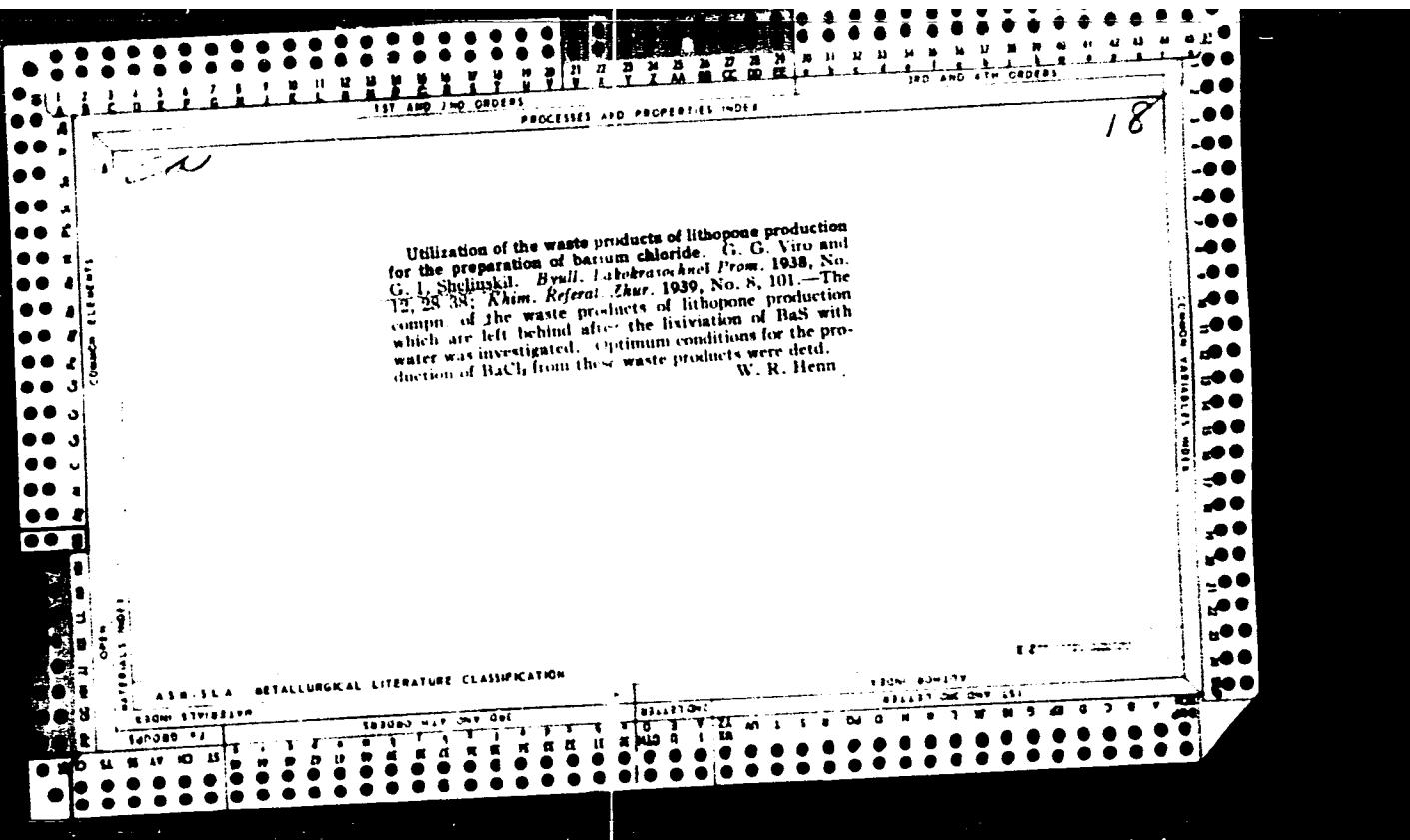
INDUS. APP.

INDUS. MACH.

INDUS. MATER.

INDUS. EQUIP.

INDUS. MACH.</p



Production of yellow and red "marses". G. L. Schmitt  
Bull. Chem. Phys. Laboratory Prod., 1939,  
No. 6, 22. Yellow vitriol was dissolved in 5 parts of H<sub>2</sub>O  
at 15-20°. Sulfuric acid (10.01 parts) was added to prevent  
pptn. of basic salts. The soln. was ptdl. with a  
soln. of 1 part Na<sub>2</sub>CO<sub>3</sub> in 2.5 parts of H<sub>2</sub>O at 15-20°.  
The ptdl. basic carbonate was heated at 80° for 2 hrs.,  
oxidized with a 15% soln. of KClO<sub>3</sub>, washed, pressed and  
dried at 55-65°. The product showed good dispersing  
and covering power. Yellow "marses" can be used in  
ground pigments, as well as in enamels. When yellow  
"marse" were heated at 600-700° a red "marse" of good  
brightness, intensity and covering power was obtained.

David Aclony

AIA SLA METALLURGICAL LITERATURE CLASSIFICATION

CLASS NUMBER

E21-2-1

Preparation of zinc yellow from zinc sulfate. G. A. Newkirk, Jr., U.S. Pat. No. 2,667,493, April 10, 1954. This patent describes the general procedure consisting of dissolving a part of the zinc sulfate with caustic soda, NaOH, and precipitating zinc hydroxide with caustic soda, NaOH, and excess potassium hydroxide. Equally good results are reported by replacing the NaOH with excess zinc sulfate and proceeding as above. Optimum yields, synthesis, and procedures are given under various conditions and several modifications are given. Zinc yellow in its brightness and covering power compares favorably with the same products obtained from zinc oxide and potassium hydroxide.

**Lead cyanamide**, a new pigment. G. I. Shchukin. *Bull. Obr. Opyt. Lekarstvennoj Prom.* 1940, No. 3 (1940). Tech. Ca cyanamide ( $\text{CaCN}_2$  80.8%;  $\text{CaCl}_2$  10.0%;  $\text{CaO}$  18.8% S 0.5-0.8%) was extd. with cold  $\text{H}_2\text{O}_2$ . A weighed amt. of  $\text{Pb}(\text{Ac})_2$  was used to ppt. sulfides. The best results were obtained by using 1.23 mol.  $\text{Pb}(\text{Ac})_2$ , 0.11 mol. per cent. of  $\text{Ca}(\text{NH}_3)_6^{2+}$ . The pH of the product is 7.2-7.3 and it possesses a satisfactory color and good covering power. D. Aelony

**APPROVED FOR RELEASE: 08/23/2000**

CIA-RDP86-00513R001549020005-5"

SHELINSKIY, Georgiy Ivanovich, uchitel' khimii (Leningrad); POZDNYAKOVA,  
N.I., redaktor; RYBIN, I.V., tekhnicheskij redaktor

[Problems and exercises for the study of organic chemistry] Zadachi-  
uprazhneniya pri izuchenii organicheskoi khimii. Moskva, Gos.  
uchebno-pedagog. izd-vo Ministerstva prosveshchenija RSFSR, 1954.  
(MLRA 8:6)  
38 p.  
(Chemistry, Organic--Problems, exercises, etc.)

SHELINSKIY, G.I. (g. Leningrad)

Determination of certain chemical concepts. Khim.v shkole 9 no.5:  
61-62 S-0 '54. (MIRA 7:9)  
(Chemistry--Study and teaching)

CHELIYEV, V.I.

Sokim Kiv, G.I. "Methodology of Study of the Fundamental Types of Chemical Reaction in the Secondary School Chemistry Course." Leninograd State Pedagogical Institute imeni A. I. Gertszen, Chair of the Methodology of Teaching of Chemistry, Leningrad, 1955.  
(Dissertation for the Degree of Candidate of Pedagogical Sciences)

SO: Knizhnye Letopis', No. 24, Moscow, Jan 55, pp 91-104

SHELINSKIY, G.I. (Leningrad)

Studying the foundations of A.M. Butlerov's structural theory  
in the chemistry course of secondary schools. Khim. v shkole  
14 no.2:41-49 Mr-Ap '59. (MIRA 12:4)  
(Stereochemistry--Study and teaching)

SHELINSKIY, G.I., kand.ped.nauk(Leningrad); KROTKOV, V.V.; PLETHER,  
Yu.V.

Useful, but poorly written book ("Chemistry made interesting"  
by I.I.Zaikovskii. Reviewed by G.I.Shelinskii, V.V.Krotkov,  
I.U.V.Pletner). Khim.v shkole 14 no.5:84-87 S-0 '59.  
(MIRA 12:12)

1. Mariyskiy pedagogicheskiy institut, g.Yoshkar-Ola  
(for Krotkov). 2. Kalininskiy pedagogicheskiy institut  
(for Pletner).

(Chemistry--Study and teaching)  
(Zaikovskii, I.I.)

SHELINSKIY, G.I.

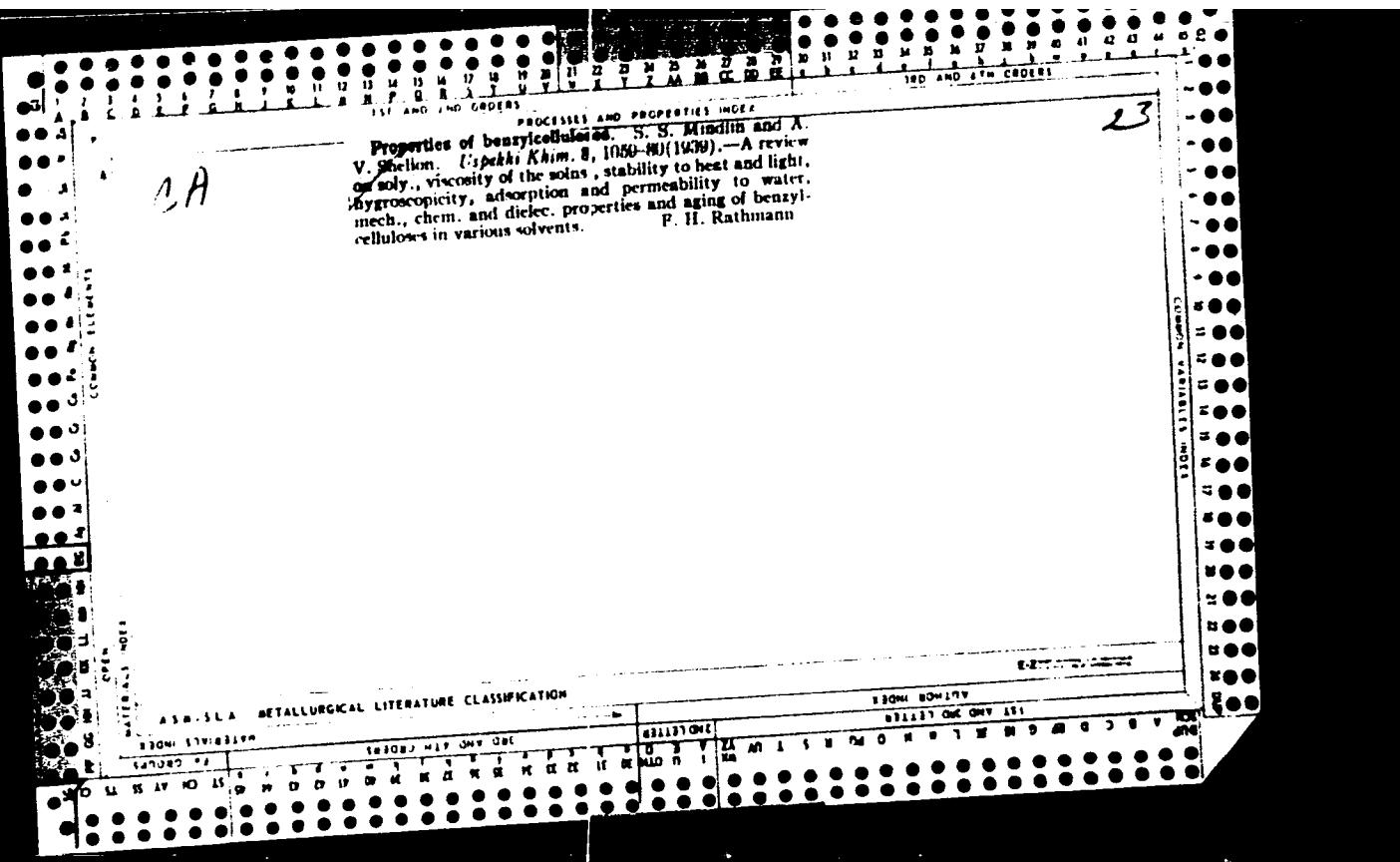
Basic stages in the formation and development of the matter concept in  
an eight-year school chemistry course. Khim. v shkole 18(1), 1963.  
O '63.

VERKH, Anatoliy Aleksandrovich; SHELINDKII, Georgii Ivanovich;  
ZHACHINTSKII, Ye., red.

[Systematic process of operations of the qualitative semi-microanalysis of cations and anions; a manual on qualitative analysis] Sistematischeskii khod kachestvennoe polimikroanaliza kationov i anionov; uchebnoe posobie po kachestvennomu analizu. Leningrad, Severo-zapadnyi zaochnyi in-t, 1964. 37 p. (MIM 18:3)

A method for determining the fluidity of celluloid and other thermoplastics. L. F. Aksberg and A. V. Shelson  
is pressed under standard conditions in a Rasching press,  
and the fluidity is measured by the length of the column 3  
H. M. Leicester

AMSLA METALLURGICAL LITERATURE CLASSIFICATION



SMELICH, A. V.

U S S R .

✓ Weather effects on the mechanical properties of phenolic plastics. I. F. Kanarets, A. A. Peshkhanov, and A. V. Shelian. *Khim. Prom.* 1954, 345-9. The optimum production conditions with respect to water absorption and mech. properties of phenolic plastics after pressing and during their stay on the press as affected by weather conditions are discussed. Weather conditions during pressing exert a very important effect upon the keeping properties of the plastics. The effects were studied at 130-200° by keeping standard shapes from 2-3 to 30-60 min. at these temps., and showed that best results are obtained when pressing at 160-170°. Preheating of the feed in a drying oven at 180° for 8 min. raises the optimum pressing temp. to 180°, but the use of temps. exceeding 170-180° produces inferior products because pressing is done at temps. exceeding those of the viscous-flow conditions. W. M. S.

SHELION, A. V.

FD 167

USSR/Chemistry - Phenolic Plastics

Card 1/1

Author : Kurnavets, I. F., and Shelion, A. V.

Title : Changes with use in the physical and mechanical properties of phenolic plastics.

Periodical : Khim. prom. 3, 15-21 (143-149), April-May 1954.

Abstract : Describe on the basis of extensive experimental data the effects of temperature, moisture, and the evaporation of volatile substances on the physical and mechanical properties of objects molded from phenol plastics. Illustrated by 12 graphs. The data are listed in 5 tables. 6 USSR references are appended.

Institution : Scientific Research Institute of Plastics.

SHELION, A. V.

FD 196

USSR/Chemistry - Plastics, Polystyrene

Card 1/1

Authors : Rutovskiy, H. N., Professor, Doctor of Technical Sciences; Shelion, A. V.

Title : Concerning the problem of inner stresses in products made of polystyrene

Periodical : Khim. prom. 4, 28-32 (220-224), June 1954

Abstract : Found in the investigation described that while internal stresses do not affect the mechanical strength of cast polystyrene bars, they reduce the resistance of the bars to deformation produced by temperature changes. Established that annealing does not eliminate the stresses. Found that an increased orientation of the plates in casting leads to better utilization of the flow capacity of the material with the result that stresses are reduced. Two USSR references, one since 1940; five foreign references. One graph, six figures, three tables

Institution : Scientific-Research and Planning Institute of Plastics

*Shelion, A.V.*

USSR/Chemistry - Plastics

FD-374

Card 1,1      Pub.50 - 7/24

Author : Kanavets, I. F., Peshekhonov, A. A., Shelion, A. V.

Title : The effect of the weather on the physical and mechanical properties of phenol plastics

Periodical : Khim. prom., No 6, 345-349(25-29), Sep 1954.

Abstract : Describe the results of an investigation of the stability of phenol-formaldehyde plastics to weather influences depending on the temperature at which pressure molding is carried out and the conditions of molding. Three references, all USSR, one 1940.

Institution : Scientific Research and Planning Institute of Plastics

Submitted :

SHELION, A.V.

*Mitchell  
copy*

✓ Changes in the physicomechanical properties of polystyrene under the effects of operating conditions. B. N. Rutovskii and A. V. Shelion. *Khim. Prom.* 1956, 411-14.— Solid and emulsion polystyrene undergo sudden changes when stored under atm. conditions, by a combination of exposure to daylight, heat, and moisture, and during the illumination in a weatherometer. Heating alone at 60° for 300 hrs., or maintaining it at 50° for 100 hrs., affected the mech. and chem. properties of polystyrene very little. A 230-day immersion of polystyrene in water failed to affect its mech. properties. W. M. Sternberg

16-18-2-9/41

AUTHORS: Yanushko, Yury A., Institute of Technical Sciences, and Shelian,  
A.V., engineer

TITLE: Making Standard Specimens of Thermoreactive Compressible  
Materials (Izgotovleniye standartnykh obraztsov iz termoreaktivnykh  
pressmaterialov)

PUBLICATION: Standardizatsiya, 1958, No. 4, pp. 49-52 (USSR)

ABSTRACT: It was presumed that the large difference in physical and mechanical properties (up to 50%) observed in tests of standard specimens produced from one and the same lot of materials, depend on the pressure under which the material hardens. The article gives a detailed description of an experiment using specimens of "K-18-I" press-powder, from which it was concluded that present pressing technology does not assure a constant pressure throughout the hardening period. A press produces the set pressure upon the mass in the press-mold only until the upper movable part of the press-mold sinks down to the support bars (as shown in schematic drawing of the investigated molds, Fig. 3). From that moment on, hardening of the mass proceeds under indefinite pressure and this accounts for the different properties of the ready material. Pressing technology must be improved, the press-molds for specimens must be stan-

Card 1/2

Making Standard Specimens of Thermoreactive Compressible Materials 28-58-2-9/41

dardized and the section "Making Specimens" in technical specifications for plastics, must be amended by the addition of recommendations for the quantities of material to be taken for specimens and the closing speed of the molds. The thickness of standard specimens should be reduced to 5-6 mm (from the accepted 10 mm). There are 2 diagrams, 3 tables and 1 drawing.

ASSOCIATION: Nauchno-issledovatel'skiy i proyektnyy institut plasticheskikh mass (Scientific Research and Project Institute for Plastics)

AVAILABLE: Library of Congress

Card 2/2      1. Plastics-Pressing-Standards    2. Plastics-Molding-Standards  
                  3. Standardization-USSR

SHELION, A. V., Cand Tech Sci -- (diss) "Study of the variations in the physicomechanical properties of polystyrene under the influence of several operational factors." Moscow, 1960. 16 pp; (Moscow Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Chemical Technology Inst im D. I. Mendeleyev); 150 copies; price not given; (KL, 29-60, 126)

52077  
2025 RELEASE UNDER E.O. 14176  
2025 RELEASE UNDER E.O. 14176

15.5570

AUTHORS:

Glukhov, Ye. Ye., Gorina, A. A., Abelion, A. V.

TITLE:

Deformation Properties of Polymers

PERIODICAL:

Vysokomolekulyarnyye soedineniya, 1960, Vol. 2, No. 1,  
pp. 38-45

TYPE: The authors discuss equation (7)  $\epsilon = \epsilon_0 \ln [\tau - \tau_0 / \tau]$  (where  $\epsilon$  = the deformation,  $\tau$  = the time,  $\epsilon_0$  and  $\tau_0$  = constants) and equation (8)  $\epsilon = \epsilon_0 \ln [(\epsilon_0 + \epsilon_1) / \epsilon_0]$  ( $\sigma$  = stress;  $\epsilon_0$ ,  $\epsilon_1$  = constants). They establish that only the value of  $\epsilon_0$  for the relevant stress and temperature need be known to calculate deformation at constant stress. For a quantitative examination it is sufficient to know the function  $\epsilon_0 = f(\sigma, T)$ , for which equation (7) is given on the basis of results of two measurements. It is further explained that the calculation of an elastic modulus is not usable for the method described.

Card 1/5

## Deformation Properties of Polymers

82077

CONFIDENTIAL - SECURITY INFORMATION  
REF ID: A661

...re when the coefficient  $\epsilon_0$  values are chosen as 1 and 100? That is proved by experiments on Florepast-4 and polyethylene (Table 1). The authors' experiments were carried out at a constant temperature made it possible to record the deformation  $\epsilon(t)$  in a given time  $t$  at different stresses and temperatures under pure shear stress conditions. The effect of the temperature on the deformation properties of polymers is given in Table 1. Fig. 2 shows the temperature dependence of the coefficient  $\epsilon_0$  for Florepast-4. The deformation parameters of the polymer after deforming in various ways are given in Table 2. Table 3 gives the deformation properties of high-density polyethylene, low density polyethylene, and polypropylene. Table 4 gives the deformation properties of various samples of Florepast-4. The experiments confirm the theoretical conclusions, which are important for practical purposes. The constants  $T_0$  and  $\epsilon_0$  characterize the nature of the polymer, the constants  $\epsilon_0$  and  $T_0$  its structure. When these constants are known, the deformation in a given time  $t$  is given by the stress and temperature. There are 2 figures in the article and 1 reference in Soviet and US.

X

Land 1/3

Deformation Properties of Polymers

82077  
S/190/60-002/01/05/021  
R004/P061

ASSOCIATION Nauchno-issledovatel'skiy institut plasticheskikh materialov  
(Scientific Research Institute of Plastics)

SUBMITTED July 16, 1969

Form 5/3

21 38

15 8565 1203.1573, 260 1137, 1160

S/190/61/C03/004/013/014  
B101/B207

AUTHORS: Glukhov, Ye. Ye., Shelion, A. V.

TITLE: Temperature dependence of the deformation behavior of polymers

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961, 630-636

TEXT: The deformation occurring as a result of shear is defined as: 1) breaking deformation, 2) flow deformation and 3) hardening deformation. This paper deals with hardening deformation  $\epsilon$  at short-time stress of vitrified polymers. The following equation is written down for constant temperature:  $\epsilon = \epsilon_e \ln [(\tau + \tau_0)/\tau_0]$  (1)  $\tau_0$  is the constant denoting the stability of structure to short-time mechanical action. It depends on stress and temperature. The dependence of the deformation coefficient  $\epsilon_e$  is defined by  $\sigma = \sigma_e \ln (\epsilon_e + \epsilon_0)/\epsilon_0]$  (2), where  $\epsilon_0$  is a constant expressing the regularity of polymer packing, and for  $\sigma_e$  the following holds:  $1/T = (1/T_0) \ln (\sigma_e/\sigma_0)$  (3).  $T_0$  and  $\sigma_0$  are constants of the equilibrium state of the polymer and are independent of experimental conditions. By means of a perfected apparatus described in Ref. 6 (Ye. Ye. Glukhov, Fribor Card 1/5

Temperature dependence ...

21138  
S/130/61/003/004/013/014  
B101/B207

dlya issledovaniya deformatsionnykh svoystv plastmass (apparatus for the investigation of the deformation behavior of plastics), Filial VINITI GNTK, SSSR, Moscow, 1960) the deformation was measured as a function of time on 1) block polystyrene; 2) polypropylene, and 3) plasticized polyvinyl chloride. The data for polystyrene, whose deformation could only be measured at higher temperatures, are given in Table 1. Table 2 shows the data for polypropylene, and, Table 3 for polyvinyl chloride (PVC) treated in a different manner. For all three polymers a linear function between  $\ln \sigma_e$  and  $1/T$  was found to exist, so that the applicability of the equations (1), (2), and (3) was proven. The effect of the constants  $T_0$  and  $\sigma_0$  is described by the following equations:  $\varepsilon = \varepsilon_0 (e^n - 1) \ln (\tau + \tau_0)/\tau_0$  (4), where  $n = (\sigma/\sigma_0) \exp(-T_0/T)$  may also be expressed by  $\exp(-u/RT)$ , where  $u$  is the activation energy of the creep process.  $T_0 = \bar{u}/R = u/2$  is found. The following is concluded: 1) The ratio  $T_0/T$  expresses the capability of the polymer of retaining its shape. 2) The greater  $\sigma_0$ , the lesser is the influence exerted by  $\varepsilon$  at  $T_0/T = \text{const}$ .  $\sigma_0$  expresses therefore the hardening capability of the polymer. 3)  $T_0$  is related to the kinetic energy of thermal motion,  $\sigma_0$  with the external effect. Both constants determine the ther-

Card 2/5

Temperature dependence ...

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B101/B207

mal stability of the polymer. For the latter as well as for frost resistance, the following equation is written down:  $T = T_0 / \ln(\sigma_e / \sigma_0)$  (6). The  $\xi_0$  values for PVC which are high as compared to other polymers indicate irregular packing, which renders the production of regular products from this substance difficult. There are 4 figures, 4 tables, and 7 Soviet-bloc references.

ASSOCIATION: Nauchno-issledovatel'skiy institut plasticheskikh mass  
(Scientific Research Institute of Plastics)

SUBMITTED: August 29, 1960

Температура испытания, °C	$\sigma_{\epsilon_i}$ кГ/см <sup>2</sup>	$\epsilon_i \cdot 10^6$	$\ln \frac{\sigma}{\sigma_i}$	$\Delta \ln \frac{\sigma}{\sigma_i}$
Table 1				
60,3	76,5	0,232	-41	-3,1
64,3	34,5	0,079	-36	15,0
70	32,0	0,110	-15	6,0
75	22,0	0,080	-18	5,0

Card 3/5

L 12970-63 EPR/EPF(c)/EMP(j)/ENT(m)/BDS AFFTC/ASD Ps-4/Pc-4/Pr-4 RM/WW  
ACCESSION NR: AP3000402 S/0191/63/000/005/0049/0052 70  
15 69

AUTHOR: Shelion, A. V.

TITLE: Alteration of elastic and viscous-flow properties of polystyrene under the influence of operating factors

SOURCE: Plasticheskiye massy\*, no. 5, 1963, 49-52

TOPIC TAGS: elastic properties, viscous flow, polystyrene, Kanavets plastometer, plastometric method

ABSTRACT: The plastometric method (Kanavets plastometer) was used to study the processes occurring in the aging of polystyrene. Test samples consisted of pressure-cast block and emulsified polystyrene, the latter containing 5% dibutylphthalate and 0.2% lampblack. Significant deterioration occurred with long exposure of polystyrene products in the open air, where they were subjected to the action of sunlight, heat, humidity, etc. Aging started at the surface and deterioration was therefore greatest in products with larger specific surfaces. The samples gradually turned yellow. Infrared study of the oxidation products revealed the presence of C=O groups. It is hypothesized that the major factor responsible for the observed deterioration is the oxidizing and destructive action of the ultraviolet rays of the sun. When polystyrene was stored under normal room conditions, its elastic, Card 1/2

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ACCESSION NR: AP3000402

viscous-flow, physico-mechanical, and dielectric properties proved highly resistant, and its original properties were intact after 2 years in the light and 10 years in the dark. Heating the samples at 60°C for 300 hours and long-term exposure to water (up to 230 days) had no appreciable effect on the elastic and viscous-flow properties of polystyrene. "The author deems it a duty to express his gratitude to I. F. Kanavets for his valuable advice and aid in the conduct of the experiments." Orig. art. has: 4 figures, 3 tables.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 10Jun63

ENCL: 00

SUB CODE: MA

NO REF SOV: 008

OTHER: 001

Card 2/2

SHELIPOVA, L. P.

Shelipova, L. P. - "On the problem of the histological structure of the seminal receptacle of the bee uterus", Doklady (Mosk. s.-kh. akad. im. Timiryazeva), Issue 8, 1943, (In index: 1949), p. 154-58.

SO: U-411, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949).

NANOBASHVILLI, Ye.M.; SHELIYA, N.G.

Copper sulfide formation in  $\text{CuCl}_2$  -  $\text{Na}_2\text{S}$  -  $\text{H}_2\text{O}$  system. Trudy Inst.  
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(Sodium sulfide) (Copper sulfide) (Copper chloride)

BAVITADZE, Ye.G.; MDFBALIY, N.Ye.; SHELIYA, N.G.

Interaction of yttrium chloride with sodium, ammonium, and potassium oxalates. Soob. AN Gruz. SSR 40 no.2:325-332 N '65.

(MIRA 19:1)

I. Institut fizicheskoy i organicheskoy khimii AN GruzSSR.  
Submitted June 5, 1965.

SHELIYA, R.N.

Surgical treatment of traumatic abscesses of the brain. Vop.neirokhir.  
22 no.2:38-40 M-Apr '58. (MIRA 11:4)

1. Neyrokhirurgicheskoye otdeleniye Tbilisskogo nauchno-issledovatel'skogo instituta travmatologii i ortopedii.  
(BRAIN, abscess,  
traum., surg. (Ris))

SHELIYA, R. N.: Master Med Sci (diss) -- "The clinical aspects and surgical treatment of late traumatic diseases of the lateral brain ventricles". Tbilisi, 1958, published by the Acad Sci Georgian SSR. 25 pp (Tbilisi State Med Inst), 150 copies (KL, No 6, 1959, 147)

1. Research Institute of Neurosurgery  
and Traumatology of the Central Institute of  
Neurology and Neurosurgery.

2. Research Institute of the Central Institute of  
Neurology and Neurosurgery (Moscow).  
Director - Prof. V.V. Ugryumov.  
CIA 17124

3. Moscow-issledovatel'skiy neirokhirurgicheskiy institut imeni  
M.M. Il'chenko direktor - prof. V.V. Ugryumov.

SHELIYA, R.N., kand.med.nauk

Ependymomas of the fourth ventricle with oral orientation of  
the growth. Vop. neirokhir. 28 no.6:25-27 N-D '64.

(MIRA 18:4)

1. Leningradskiy nauchno-issledovatel'skiy neirokhirurgicheskiy  
institut imeni Polenova (dir. - prof. V.M.Ugryumov).

GOTSIKIDZE, P.M., otv. za vypusk; SHELIYA, Sh.K., red.; ASLANIKASHVILI, A.F., sost. kart; DEMUROV, A.O., tekhn. red.

[Soviet Georgia from 1921 to 1961; statistics] Sovetskaia Gruzia za 40 let; statisticheskii sbornik. Tbilisi, Gosstatizdat, 1961. 207 p.  
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[National economy of the Georgian S.S.R. in 1961;  
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1. Zamestitel' nachal'nika Tsentral'nogo statisticheskogo  
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Cand Biol Sci - (diss) "Spottiness of apple leaves in Georgia."  
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SHELKACHEV, V. N., KRYLOV, A. F., TREBIN, F. A., BORISOV, Y. A., KORTKOV, S. T.,  
BUCHIN, A. N., MAMIMOV, M. I., ABASOV, M. T., MIRCHINK, M. F., VASILEVSKIY, V. N.,  
KOZLOV, A. I., and MINSKIY, EM.

"Development of the Theory and Practice of Oil and Gas Field Production  
in the USSR."

<sup>162</sup>  
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PAVLYUCHENKO, M.M. [Pauliuchenka, M.M.]; SHELKANOVSEVA, N.A. [Shalkanoutsava,  
N.A.]

Kinetics and mechanism of the carbon reduction of cadmium oxide. Vestsi  
AN BSSR. Ser. Fiz.-tekhn. nauk. no.2:42-47 '63. (MIRA 17:1)

[AVI YUCHENKO, M.M. [Pauliuchenka, M.M.], SHELKANOVTSEVA, N.A. [Shalkanoutsava, N.A.]

Kinetics and mechanism of lead oxide reduction by carbon.  
Vestsi AN BSSR. Ser. fiz.-tekhn. nav. no.3:46-53 '62.

(MIRA 18:3)

SHELKIN, K. I.

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✓ On Combustion in a Turbulent Flow. K. I. Sheklin. (Zhurnal Tekhnicheskoi Prikhi (U.S.S.R.), Vol. 13, No. 9-10, 1933) U.S. N.A.C.A. Technical Memorandum No. 1110, February, 1947. 16 pp., figs. 5 references.

The characteristics introduced by turbulence in the process of flame propagation are considered. On the basis of geometric and dimensional considerations an expression is obtained for the velocity of the flame propagation in a flow of large scale of turbulence. The data on the measurement of the flame speeds of various fuels in the engines and the measurement of the dependence of the flame speed on the rotational speed confirm the theoretic conclusions, if it is assumed that the increase in the combustion rate in the engine is determined by the turbulence.

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SHELKIN, K. I.

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311. On Combustion in a Turbulent Flow. K. I. Shelkin. 15 pages. Feb. 1947. National Advisory Committee for Aeronautics, Washington. (Technical Memorandum No. 11110.) Translated from *Journal Tech. Phys.* (U.S.S.R.), v. 13, nos. 9-10, 1943, p. 520-530.

Characteristics introduced by turbulence in the process of flame propagation are considered. On the basis of geometrical and dimensional considerations an expression is obtained for the velocity of flame propagation in large scale turbulent flow.

(See also Abst. Nos. 13, 248, 349, 384, 385, 875, 888)

ASA SLA METALLURGICAL LITERATURE CLASSIFICATION

SHELKIN, K. I.

PA 11T55

USSR/Gas - Ignition  
Combustion chambers

May 1947

"The Beginning of Detonation in Gas in Tubes with  
Rough Surface," K. I. Shelkin, 6 pp

"Zhur Eksp i Teor Fiz" Vol XVII, No 5

Describes the extreme accelerating effect of rough-  
ness of a tube on the burning of gases in the pre-  
detonation period of flame expansions. Illustrated  
with photographs and graphs.

11T55

D'YAKONOV, A.I.; MITIN, N.Ye.; SHELIKOPLYAS, P.A.

Study of the Permian and Triassic sediments of the Belaya  
Basin in the northwestern Caucasus. Trudy KF VNII  
no.10:149-157 '62. (MIRA 15:11)  
(Belaya Valley (Krasnodar Territory)--Geology, Stratigraphic)

BONDARCHUK, V.G., akademik, otv. red.; SHELKOPLYAS, V.M., red.;  
NED'NIK, A.F., red.

[Materials on the Quaternary period of the Ukraine] Materialy  
po chetvertichnomu periodu Ukrayiny. Kiev, Naukova dumka,  
1965. 328 p. (MIRA 18:9)

1. Akademiya nauk UkrSSR, Kiev. Komisiya vyvchannya chetvertyn-  
noho periodu. 2. Akademiya Nauk Ukr. SSR Institut geologicheskikh  
nauk (for Bondarchuk).

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SHELKOPLYAS, V.N. [Shovkoplias, V.M.]

Mineralogical composition of the Quaternary sediments of the  
glacial zone of the western slope of the Dnieper elevation.  
Dop. AN UkrSSR no.9:1238-1243 '62. (MIRA 18:4)

1. Institut geologicheskikh nauk AN UkrSSR.

BABOKIN, I.A., redaktor; BALBACHAN, Ya.I., redaktor; BARABAHOV, F.A., redaktor; BUCHNEV, V.K., redaktor; VLADIMIRSKIY, V.V., redaktor; GRIGOR'YEV, S. Ye., redaktor; DOKUKIN, A.V., redaktor; ZHABO, V.V. redaktor; ZADEMIDKO, A.N., redaktor; ZAITSEV, A.P., redaktor; IL'ICHEV, A.S., redaktor; KAGAN, V.Ya., redaktor; KRASNIKOVSKIY, G.V., redaktor; KRASOZOV, I.P., redaktor; KRIVONOGOV, K.K., redaktor; LALAYANTS, A.M., redaktor; MOGILEVSKIY, N.M., redaktor; ONIKA, D.G., redaktor; OSTROVSKIY, S.B., redaktor; OSTROVSKIY, S.M., redaktor; PEYSAKHOVICH, G.I., redaktor; POCHENKOV, K.I., redaktor; SIRYACHENKO, F.N.;redaktor. SKOCHINSKIY,A.A., redaktor; STUGAREV, A.S., redaktor; SKORKIN, K.I.; SKURAT, V.K., redaktor; SOBOLEV, G.G., redaktor ;TERPITOREV, A.M., redaktor; KHUDOCOVVTSEV, N.M., redaktor; TSYPKIN, V.S., redaktor; SHEVYAKOV, L.D., redaktor; SHIKOV, A.A., redaktor;ANIREYEV, G.G., tekhnicheskiy redaktor.

[Safety rules in coal and shale mines] Pravila bezopasnosti v ugol'nykh i slantsevykh shakhtakh. Moskva, Ugletekhizdat, 1951.  
207 p. (MLRA 9:1)

1. Russia (1923- U.S.S.R) Ministerstva ugol'noy promyshlennosti.  
(Coal mines and mining-Safety measures)

SHELKOV, A.A.

KUZ'MICH, A.S., redaktor; BARABANOVA, F.A., redaktor; BOHRCV, I.V., redaktor;  
VLADIMIRSKIY, V.V., redaktor; GRAFOV, L.Ye., redaktor; DOKUKIN, A.V.,  
redaktor; YERASHKO, I.S., redaktor; ZABLUDSKIY, G.P., redaktor; ZADE-  
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tor; KAGAN, F.Ya., redaktor; KRASNIKOVSKIY, G.V., redaktor; KRYIVONOGOV,  
K.K., redaktor; LALAYANTS, A.M., redaktor; MEJAMED, Z.M., redaktor;  
MINDELI, E.O., redaktor; MOGILEVSKIY, N.M., redaktor; OSTROVSKIY, S.B.,  
redaktor; POPOV, T.T., redaktor; SKOCHINSKIY, A.A., redaktor; SKURAT,  
V.K., redaktor; SOBOLEV, G.G., redaktor; STUGAREV, A.S., redaktor;  
SUMCHENKO, V.A., redaktor; TERPIGOREV, A.M., redaktor; SHEVYAKOV, I.D.,  
redaktor; SHELKOV, A.A., redaktor; ANDREYEV, G.G., tekhnicheskiy redaktor

[Safety regulations in coal and shale mines] Pravila bezopasnosti v  
ugol'nykh i slantsevykh shakhtakh. Moskva, Ugletekhizdat, 1953. 226 p.  
(MIRA 8:4)

1. Russia (1923- U.S.S.R.) Ministerstvo ugol'noy promyshlennosti.  
(Coal mines and mining--Safety measures)

BARDIN, I.; BELAN, R.; BEKHTIN, N.; BOYKO, V.; BORISOV, A.; BYCHKOV, V.;  
VASILENKO, S.; VINOGRADOV, V.; VISHNEVSKIY, A.; VODNEV, G.; DVORIN,  
S.; DZHAPARIDZE, Ye.; DIDEJKO, V.; D'YAKONOV, N.; ZHURAVLEV, S.;  
ZAKHAROV, A.; IVANOV, I.; KIRSANOV, M.; KOLYADA, G.; KOROBOV, P.;  
LESKOV, A.; LUKICH, L.; LYUBIMOV, A.; MELESHKIN, S.; MYRTSYMOV, A.;  
PERTSEV, M.; PETRUSHA, F.; PITERSKIY, A.; POPOV, I.; RAYZER, D.;  
ROZHKOV, A.; SAPOZHNIKOV, L.; SEDOV, P.; SOKOLOV, P.; TEVOSYAN, I.;  
TIKHONOV, N.; TISHCHENKO, S.; FILIPPOV, B.; FOMENKO, N.; SHELKOV,  
A.; SHEREMET'YEV, A.

Fedor Aleksandrovich Merkulov. Koks i khim.no.7:62 '56. (MLRA 9:12)  
(Merkulov, Fedor Aleksandrovich, 1900-1956)

GORBACHOV, T.F.; KOZHEVIN, V.G.; KARPENKO, Z.G.; MOLCHANOV, I.I.; POPOV, V.E.;  
SOKOLOV, V.D.; SHELKOV, A.A., otvetstvennyy red.; RATNIKOVA, A.P.,  
red.izd-va; BARILOV, A.P., tekhn.red.; NADWINSKAYA, A.A., tekhn.red.

[Kuznetsk Coal Basin] Kuznetskii ugol'nyi bassein. Ugletekhizdat,  
1957. 199 p. (MIRA 11:2)  
(Kuznetsk Basin--Coal mines and mining)

SOV/68-58-11-16/25

AUTHOR: Shelkov, A.

TITLE: In the State Scientific-Technical Committee of the Council  
of Ministers of the USSR (V gosudarstvennom nauchno-  
tekhnicheskom komitete soveta ministrov SSSR)

PERIODICAL: Roks i Khimiya, 1958, Nr 11, p 55 (USSR)

ABSTRACT: The above Committee organised a temporary committee for  
coking raw materials and materials for the production of  
plastics, synthetic fibres and other synthetic materials

and chemical products. Duties of the Committee:

a) determination of the main directions of scientific  
research, design and experimental-industrial work on  
increasing the range and volume of production of coking  
raw materials and semi products as well as on widening the  
field of their application; b) preparation of proposals  
on increasing rational utilisation of coke oven gas for  
needs of the chemical industry; c) consideration of new  
technological processes (under development); d) periodic  
consideration of the progress of scientific-research,  
design and experimental industrial work; e) to supply

Card 1/2 technical help in the construction of experimental plants,

In the State Scientific-Technical Committee of the Council of Ministers of the USSR

SOV/68-58-11-18/25

development of technological processes, design of plant, means of control and automation; f) consideration of problems of the necessary quality of raw materials and semi-products produced by the coking industry for the chemical industry and preparation of the necessary proposals; and g) consideration of proposals on starting the production of new products in the coking and chemical industries.

M.S. Litvinenko, Professor, Doctor of Chemical Science, was nominated as the Chairman of the Committee. Membership of the Committee consists of representatives of Gosplan SSSR, Gosplan Ukrainian SSR, Stalino sovnarkhoz, Professors of establishments for higher education, scientists from the Academy of Science of the USSR, scientific research and design institutes of the coking and chemical industries.

Card 2/2

SHELKOV, A.A., gorny inzh.

Expansion of hydraulic mining and hydraulic haulage is a most important potentiality for increasing labor productivity and reducing coal costs. Ugol' 33 no.10:21-23 O '58. (MIRA 11:11)  
(Hydraulic mining) (Coal--Costs)

STREL'NIKOV, Dmitriy Aleksandrovich; KOZHEVIN, Vladimir Grigor'yevich;  
GORBACHEV, Timofey Fedorovich; SHELKOV, A.A., gornyy inzh.,  
retsenzent; BURSHTEYN, P.S., gornyy inzh., retsenzent; LINDENAU,  
N.I., gornyy inzh., otv.red.; OKHRIHENKO, V.A., red.izd-va;  
ALADOVA, Ye.I., tekhn.red.; KOROVENKOVA, Z.A., tekhn.red.

[Mining of Kuznetsk Basin coal deposits] Razrabotka ugol'nykh  
mestorozhdenii Kuzbassa. Moskva, Ugletekhnizdat, 1959. 886 p.  
(MIRA 12:1)

(Kuznetsk Basin--Coal mines and mining)

SHILKOV, A.A.; SHARAYEV, A.N.

Potentials for increasing labor productivity in the Kuznetsk  
Basin coal mines. Ugol' 35 no.10:15-20 0'60. (MIRA 13:10)  
(Kuznetsk Basin--Coal mines and mining--Labor productivity)

PROTSAY, Fedor Ivanovich. Prinimal uchastiye CGIYENKO, A.D., inzh.;  
SHELKOV, A.A., otv. red.; MIROSHNICHENKO, V.D., red. izd-va;  
OVSEYENKO, V.G., tekhn. red.

[Economics and production organization in underground hydraulic  
coal mining]Ekonomika i organizatsiya proizvodstva pri podzemnoi  
gidrodobyche uglia. Moskva, Gosgortekhizdat, 1962. 226 p.  
(MIRA 16:1)

(Hydraulic mining)

VODNEV, G.G.; SHELKOV, A.K.; DIDENKO, V.Ye.; FILIPPOV, B.S.; TSAREV, M.N.;  
ZASHVARA, V.G.; LITVINENKO, M.S.; MEDVEDEV, K.P.; MOLODTSOV, I.G.;  
LGALOV, K.I.; RUBIN, P.G.; SAPOZHNIKOV, L.M.; TYUTYUNNIKOV, G.N.;  
DMITRIYEV, M.M.; LEYTES, V.A.; LERNER, B.Z.; MEDVEDEV, S.M.; REVYAKIN,  
A.A.; TAYCHER, M.M.; TSOGLIN, M.E.; DVORIN, S.S.; RAK, A.I.; OBUKHOV-  
SKIY, Ya.M.; KOTKIN, A.M.; ARONOV, S.G.; VOLOSHIN, A.I.; VIROZUB, Ye.V.;  
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KUSHNAREVICH, N.R.; BRODOVICH, A.I.; NOSALEVICH, I.M.; SHTROMBERG, B.I.;  
MIROSHNICHENKO, A.M.; KOPELIOVICH, V.M.; TOPORKOV, V.Ya.; AFONIN, K.B.;  
GOFTMAN, M.V.; SEMENENKO, D.P.; IVANOV, Ye.B.; PEYSAKHZON, I.B.;  
KULAKOV, N.K.; IZRAELIT, E.M.; KVASHA, A.S.; KAFTAN, S.I.; CHERMNYKH,  
M.S.; SHAPIRO, A.I.; KHALABUZAR', G.S.; SEKT, P.Ye.; GABAY, L.I.;  
SMUL'SON, A.S.

Boris Iosifovich Kustov: obituary. Koks i khim. no.2:64 '55. (MLRA 9:3)  
(Kustov, Boris Iosifovich. 1910-1955)

Sheikov, A. K.

✓ Problems Facing the By-Product Coking Industry. A. K. Sheikov. (*Stal'*, 1955, (8), 675-678). [In Russian]. A broad survey is given of recent developments in the coking industry of the U.S.S.R., with special reference to the requirements of iron and steel production. Problems confronting the industry are discussed.—S. X.

DIDENKO, V.Ye.; TSAREV, M.N.; DMITRIYEV, M.M.; LEYTES, V.A.; OBUKHOVSKIY,  
Ya.M.; IVANOV, Ye.B.; CHERTOK, V.T.; URSALENKO, R.N.; KRIGER, I.Ya.;  
PINCHUK, A.K.; ANTONENKO, N.Z.; SMUL'SON, A.S.; VASIL'CHENKO, S.I.;  
DRASHKO, A.M.; RAYEVSKIY, B.N.; KUCHIRYAVENKO, D.N.; SAVCHUK, A.I.;  
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VOLODARSKIY, M.B.; KAL'CHENKO, G.D.; LEVCHENKO, V.M.; BASHKIROV, A.A.;  
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FOMIN, A.F.; LESHCHINA, A.I.; FANKEL'BERG, G.Ye.; KHODANKOV, A.T.;  
MAKARENKO, I.S.; KARPOVA, K.K.; VASILENKO, I.M.; VOLOSHCHUK, A.S.; SHEL-  
KOV, A.K.; FILIPPOV, B.S.; TYUTYUNNIKOV, G.N.; DOLINSKIY, M.Yu.; NIKI-  
TINA, P.P.; MEDVEDEV, S.M.; TSOGLIN, M.E.; LERNER, R.Z.; BOGACHEV, V.I.

Mihail IAkovlevich Moroz; obituary. Kors i khim.no.3:64 '56. (MLRA 9:8)  
(Moroz, Mihail IAkovlevich 1902?-1956)

AFONIN, K.B.; BURTSEV, K.I.; BYSTROV, S.N.; VINETS, G.B.; VODNEV, G.G.; VORONIN, A.S.; GEVLICH, A.S.; GRYAZNOV, N.S.; GUDIM, A.F.; GUSYATINSKIY, M.A.; DVORIN, S.S.; DIDENKO, V.Ye.; DMITRIYEV, M.M.; DODDE, M.M.; DOROGOBID, G.M.; ZHDANOV, G.I.; ZAGORUL'KO, A.I.; ZELENETSKIY, A.G.; IVASHCHENKO, Ya.N.; KAFTAN, S.I.; KVASHA, A.S.; KIREYEV, A.D.; KLISHEVSKIY, G.S.; KOZYREV, V.P.; KOLOBOV, V.N.; LGALOV, K.I.; LEYTER, V.A.; LERNER, B.Z.; LOBODA, N.S.; LUBINETS, I.A.; MANDRYKIN, I.I.; MUSTAFIN, F.A.; MIROVSKIY, N.Kh.; NEFEDOV, V.A.; OBUKHOVSKIY, Ya.M.; PRITSEV, M.A.; PETROV, I.D.; PODOROZHANSKIY, M.O.; POPOV, A.P.; RAK, A.I.; REVYAKIN, A.A.; ROZHKOV, A.P.; ROZENGAUZ, D.A.; SAZONOV, S.A.; SIGALOV, M.B.; STOMAKHIN, Ya.B.; TARASOV, S.A.; FILIPPOV, B.S.; FRIDMAN, N.K.; FRISHEBERG, V.D.; KHAR'KOVSKIY, K.V.; KHOLOPTSEV, V.P.; TSAREV, M.N.; TSOGLIN, M.E.; CHERNYY, I.I. CHERTOK, V.T.; SHELKOV, A.K.

Samuil Berisovich Bamme. Keks i khim. no. 6:64 '56. (MLRA 9:10)  
(Bamme, Samuil Berisovich, 1910-1956)

AUTHOR: Shelkov, A.K.

68-1-1/21

TITLE: Basic Tasks of the Coking Industry in 1957. (Osnovnyye zadachi koksokhimicheskoy promyshlennosti v 1957 godu)

PERIODICAL: Koks i Khimiya, 1957, no.1, pp. 3 - 4 (USSR)

ABSTRACT: A 4.5% increase in the output of coke is planned for 1957, which is expected to be met by building 9 new coke oven batteries. The most important task for 1957 is to improve the quality of coke, since in 1956 a small deterioration took place. The first large-capacity battery in the USSR will start operating in 1957 (useful volume of the oven 30 m<sup>3</sup>) on the Yasinovsk Works. On the same works an experimental plant (industrial scale) for the beneficiation of coals in heavy suspension and on the N. Tagilsk Works a plant for preferential grinding of coals will start operating. Work on continuous coking of gas and weakly-caking coals which was started in 1956 will continue on a pilot plant built on the Kharkov Coke Oven Works (Kharkovskiy Koksokhimicheskiy Zavod). The other tasks mentioned are: fumeless charging of coke ovens, mechanisation of charging, automation of heating of coke-ovens, control of constant moisture in coal charges, their weighing and levelling as well as the operation of coke wharves. On the by-product side, the following tasks are mentioned: de-sulphurisation of coke-oven gas by the vacuum-carbonate method (in 1957 three new plants

Card 1/2

AUTHOR: Sielkov, A.K.

62-11-1/11

TITLE: The Development of the Coking Industry of the USSR During the Last 40 Years (Razvitiye koksokhimicheskoy promyshlennosti SSSR za 40 let)

PERIODICAL: Koks i Khimiya, 1957, No.11, pp. 3 - 10 (USSR).

ABSTRACT: The development of the coking industry in the USSR is described. The increase in the output of coke from 1913 to 1956 and planned output for 1960 - Table 1. Increase in the production of coking by-products 1929-1956 - Fig. 1. The output of new plants put into operation during 1931-1940 - Table 2. The distribution of the production of coke according to regions during 1913 - 1940 - Table 3. Improvement in the coke quality during 1931-1940 on Southern and eastern works - Table 4. A comparison of the yields of by-products in 1930 and 1940 - Table 5. The consumption of coal from various coal basins in 1913-1956 - Fig. 7. A comparison of the rate of improvement of the quality of coke during 1923-1956 - Fig. 8. There are 5 tables and 8 figures.

ASSOCIATION: Gosplan RSFSR

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SOV/2127

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SHELKOV, A.K.

For a faster adoption of the new technology. Koks i khim.  
no.11:7-9 '62. (MIRA 15:12)

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nauchno-issledovatel'skikh rabot.  
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SHELKOV, L.S.; KOSTIN, A.

Investigating the photometric characteristics of photon counters.  
Fiz.shor. no.4:195 '58. (MIRA 12:5)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR.  
(Photons)

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Photon Counters for Accurate Measurements of Ultraviolet Radiation

characteristics have been obtained for self-quenching photon counters with photo-cathodes of various materials. Relatively large counting rates were used to ensure low statistical errors. A photon counter has been developed which has a Cu-Be photo-cathode and a tungsten grid which has a screen. Such a construction considerably improves the constancy of the photo-cathode sensitivity. Experiments showed that Cu-Mg and Cu-Be photo-cathodes have very noticeable advantages. Fig 11 shows the construction of a photon counter developed by the authors which has a low dark current and low probability of formation of spurious pulses. In Fig 11 1 is the stainless steel cathode cylinder, 2 is a tungsten screen grid 3 is a Cu-Be photo-cathode 4 are quartz to glass seals 5 is a fused quartz window 6 are Kovar discs 7 is a quartz tube and 8 is the anode wire. The area of the photo-cathode was made as small as possible. The quartz window has an 80% transmission for  $\lambda = 1800 \text{ \AA}$ . Fig 8 shows the variation in the sensitivity of a photon counter with a Cu-Be photo-cathode (curve 1) and a counter with an identical photo-cathode

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Photon Counters for Accurate Measurements of Ultraviolet Radiation  
but with an additional screen grid (curve 2). The measurements were carried out consecutively with a light source of constant intensity. The counting rate is plotted along the vertical axis and the number of the observation along the horizontal axis. Fig 9 shows the sensitivity of the above two counters as a function of the total number of counts. The counting rate is plotted on the vertical axis and the total number of recorded pulses on the horizontal axis. Fig 10 shows the absolute spectral characteristics of Cu-Be photo-cathode counters at the beginning of their work (curve 1 refers to a counter without the grid and curve 3 with the screen grid) and after  $10^6$  recorded counts (curve 2 refers to the counter without the grid and curve 4 to the counter with the screen grid). All this work has shown that counters using the screen grid have more stable photometric characteristics. The main working parameters of an experimental set of counters with Cu-Be photo-cathodes and screen grids are given in Table 1. The maximum background is 35 pulses/min, the length of the plateau is 150-250 V and the plateau slope is between 0.05%-0.1% per V.

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Photon Counters for Accurate Measurements of Ultraviolet Radiation

The working voltage is between 1100 and 1200 V and the maximum counting rate is 40 000 pulses/min. All these results show that these counters may be used as highly sensitive detectors of ultraviolet radiation in the range 1900-3000 Å. The mechanism of the effect of the screen grid will be investigated later. There are 11 figures, 2 tables and 18 references, 9 of which are Soviet, 3 French, 1 German and 6 English.

ASSOCIATIONS: Fizicheskiy institut AN SSSR (Physical Institute of the Acad. Sci. USSR) and Moskovskiy elektrolampovyy zavod (Moscow Electric Lamp Works).

SUBMITTED April 19 1958

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